

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-9. (canceled)

10. (previously presented): A filtration arrangement comprising:

an aeration hood comprising an upper wall and at least one downwardly extending side wall, the at least one side wall at least partially shrouding at least one membrane module vertically positioned within a feed tank, the aeration hood comprising at least one open-ended tube distinct from any side wall of the aeration hood, the at least one open-ended tube extending downwardly from the upper wall, the aeration hood configured and arranged such that a gas fed into the aeration hood will displace feed liquid and lower a level of feed liquid in the aeration hood,

each of the at least one open-ended tubes having at least one of the at least one membrane modules mounted therein, at least one of the at least one membrane modules in fluid communication with an interior of the feed tank through a lower end of the at least one open-ended tube,

at least one aeration inlet in a wall of the at least one open-ended tube, and

the at least one downwardly extending side wall extending to below the location of the at least one aeration inlet in the wall of the at least one open-ended tube.

11. (previously presented): The filtration arrangement according to claim 10, wherein at least one of the aeration hood side walls is formed by a side wall of the feed tank with the upper wall being sealingly attached to the at least one aeration hood side wall.

12. (previously presented): The filtration arrangement according to claim 10, wherein the at least one aeration inlet is disposed adjacent to a lower end of the at least one open-ended tube.

13. (previously presented): The filtration arrangement according to claim 10, wherein each of the at least one membrane modules is mounted in a corresponding open-ended tube.

14. (canceled)

15. (previously presented): The filtration arrangement according to claim 10, wherein the at least one aeration inlet is shaped as a slot.

16. (previously presented): The filtration arrangement according to claim 10, further comprising an aeration header located below the aeration hood.

17. (previously presented): The filtration arrangement according to claim 10, wherein the at least one side wall extends downward to at least a downward extent of a lower end of the at least one open-ended tube.

18. (previously presented): The filtration arrangement according to claim 15, wherein the at least one aeration inlet is spaced adjacent to a lower end of the at least one open-ended tube.

19. (previously presented): The filtration arrangement according to claim 10, wherein the at least one aeration inlet is shaped as an open-ended slot extending upwardly from a lower end of the at least one open-ended tube.

20. (previously presented): A filtration arrangement comprising:

- at least one membrane module positioned vertically within a feed tank;
- a sleeve surrounding a periphery of the at least one membrane module, the sleeve extending partially along a length of the at least one membrane module, and having an open region adjacent to a lower end of the at least one membrane module;

an aeration hood positioned within the feed tank, distinct from the sleeve, positioned to shroud the at least one membrane module at the location of the open region, the aeration hood configured and arranged such that a gas fed into the aeration hood will displace feed liquid and lower a level of feed liquid in the aeration hood;

at least one aeration opening in a wall of the aeration hood positioned adjacent to the open region, the aeration hood constructed and arranged to direct a gas through the at least one aeration opening and into an interior of the sleeve through the open region upon displacement of the feed liquid in the aeration hood; and

at least one aeration outlet in the sleeve above an upper wall of the aeration hood.

21. (previously presented): The filtration arrangement of claim 20, wherein the open region is defined by at least one opening in the sleeve.

22. (previously presented): A method of cleaning a membrane module disposed in a tank comprising:

immersing in feed liquid a filtration arrangement comprising an aeration hood shrouding the membrane module, the aeration hood comprising an open-ended tube distinct from any side wall of the aeration hood extending downwardly from an upper wall of the aeration hood, the open-ended tube partially enclosing the membrane module, a portion of a lower end of the membrane module extending from a lower end of the open-ended tube, the open-ended tube comprising an aeration inlet in a wall of the open-ended tube at a location spaced from an upper end thereof;

lowering a liquid level in the aeration hood by displacing feed liquid within the aeration hood with a gas; and

passing the gas through the aeration inlet into a volume enclosed by the open-ended tube.

23. (previously presented): The method of cleaning the membrane module of claim 22, further comprising maintaining a liquid seal at a lower end of the tube.

24. (previously presented): The method of cleaning the membrane module of claim 23, further comprising maintaining a pressure drop across the aeration inlet sufficient to maintain the liquid seal.

25. (previously presented): The method of cleaning the membrane module of claim 22, further comprising withdrawing permeate through the membrane module.

26. (previously presented): The method of cleaning the membrane module of claim 22, wherein the act of passing gas through the aeration inlet comprises scouring the membrane module with gas passed through the aeration inlet.

27. (previously presented): A water treatment system, comprising:

an aeration hood submerged in water to be treated, the aeration hood comprising an upper wall with an opening;

a tube distinct from any side wall of the aeration hood at least partially submerged in the water to be treated, the tube having a first open end sealingly secured to the upper wall at the opening; and

a membrane module disposed within the tube, the tube extending part way along the length of the membrane module and defining an open region adjacent a lower end of the membrane module, the open region comprising a portion of the lower end of the membrane module extending from a lower end of the tube, the membrane module in fluid communication with the water to be treated through the opening in the upper wall.

28. (previously presented): The water treatment system of claim 27, further comprising an aeration header submerged below the aeration hood.

29. (previously presented): The water treatment system of claim 27, wherein the tube comprises at least one aeration inlet disposed at a tube wall thereof.

30. (previously presented): The water treatment system of claim 29, wherein the membrane module is in fluid communication with water to be treated within the aeration hood through the at least one aeration inlet.

31. (canceled)

32. (previously presented): The water treatment system of claim 29, wherein the membrane module is in fluid communication with air in the aeration hood through the at least one aeration inlet.

33. (previously presented): The water treatment system of claim 32, wherein the tube has a second open end in fluid communication with the water to be treated within the aeration hood.

34. (previously presented): The water treatment system of claim 33, wherein at least one aeration opening is disposed proximate the second open end.

35. (previously presented): The filtration arrangement of claim 10, wherein the at least one aeration inlet in the wall of the at least one open-ended tube is at a location spaced from the upper end of the at least one open-ended tube.

36. (previously presented) The method of claim 22, wherein displacing the feed liquid within the aeration hood with a gas comprises displacing the feed liquid to a level below the location of the aeration inlet.